TABLE 2

Cure Profile Initiator (concentration)	1 hr/70 C oven Perkadox-16 (1%)	15/30/60 min 14 mW/cm2 blue light dl-Camphorquinone (0.5%)			15/30/60 min 14 mW/cm2 blue light Lucirin ® TPO (0.5%)		
Example #	Cure Results						
1	solid	gel-slime/gel-slime/solid			solid/solid/solid		
2	liquid	liquid/liquid/liquid			liquid/liquid/liquid		
3	liquid	gel/gel/gel			solid/solid/solid		
EXAMPLE #	% ACETONE EXTRACTABLES*						
1	<1	>95	>95	3.0	<1	<1	<1
2	100	100	100	100	100	100	100
3	100	ND	ND	ND	ND	ND	ND

*ND = not determined

The results of Table 2 are discussed with reference to the type of device-forming monomer(s) present in the samples:

Example 1

a) Hydroxyalkyl methacrylate polymers

The TPO-initiated system cured very well even after the shortest exposure time (15 minutes), while the CQ-initiated system did not cure well until one hour of exposure—and even at this exposure, extractables were three times higher than the TPO-cured system at the shortest exposure time. 2-Hydroxyethyl methacrylate (HEMA) is typically rapidly cured—yet the CQ-initiated system still gave a sluggish cure.

Examples 2 & 3

b) Vinyl monomers

The NVP/styrene sample (Ex. 2) was not cured well with any of the initiators. The NVP sample (Ex. 3) appeared to cure poorly with CQ but well with TPO. The NVP sample apparently dissolved when extracted with acetone, however. It is presumed that this result may be explained by a non-cross-linked nature of the polyvinylpyrrolidone.

The superior results obtained with TPO are surprising in view of the fact that CQ has a greater absorbency in the blue-light region than does TPO (see FIGS. **1** and **2**), and thus would be expected to have the higher activity.

The invention having now been fully described, it should be understood that it may be embodied in other specific forms or variations without departing from its spirit or essential characteristics. Accordingly, the embodiments described above are to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are intended to be embraced therein.

We claim:

1. A method of preparing a foldable, acrylic, high refractive index ophthalmic material comprising the steps of:

a) preparing a device-forming mixture comprising a benzoylphosphine oxide photoinitiator, an UV-absorbing chromophore and one or more hydrophilic device-forming monomers selected from the group consisting of: 2-hydroxyethylmethacrylate; 2-hydroxyethylacrylate; N-vinylpyrrolidone; glyceryl methacrylate; glyceryl acrylate; polyethylene oxide mono and dimethacrylates; and polyethylene oxide mono- and diacrylates; and

b) exposing the mixture to a blue-light source for a period of time sufficient to cure the device forming mixture.

2. The method of claim **1** wherein the hydrophilic monomer is selected from the group consisting of: 2-hydroxyethylmethacrylate and N-vinylpyrrolidone.

3. The method of claim **1** wherein the device material has a glass transition temperature no greater than 25° C. and an elongation of at least 150%.

4. The method of claim **1** wherein the total amount of hydrophilic monomer present in the device-forming mixture is at least 50% (w/w).

5. The method of claim **4** wherein the total amount of hydrophilic monomer present in the device-forming mixture is at least 70% (w/w).

6. The method of claim **5** wherein the total amount of hydrophilic monomer present in the device-forming mixture is at least 80% (w/w).

7. The method of claim **1** wherein the device forming mixture further comprises one or more additional device-forming monomers selected from the group consisting of: acrylic acid; C_1–C_8 arylalkylacrylates; C_1–C_8 alkylacrylates; C_1–C_8 cycloalkylacrylates; N-alkylacrylamides (where alkyl=C_1–C_4); phenoxyalkylacrylates (where alkyl=C_1–C_8); and their corresponding methacrylates.

8. The method of claim **7** wherein the total amount of additional device forming monomer is 45% (w/w) or less.

9. The method of claim **1** wherein the benzoylphosphine oxide initiator is selected from the group consisting of: 2,4,6-trimethyl-benzoyldiphenylophosphine oxide; bis-(2,6-dichlorobenzoyl)-4-N-propylphenyl-phosphine oxide; and bis-(2,6-dichlorobenzoyl)-4-N-butylphenylphosphine oxide.

10. The method of claim **9** wherein the benzoylphosphine oxide initiator is 2,4,6-trimethyl-benzoyldiphenylphosphine oxide.

11. The method of claim **1** wherein the amount of benzoylphosphine oxide initiator is less than about 3% (w/w).

12. The method of claim **1** wherein the amount of benzoylphosphine oxide initiator is about 1% (w/w).

13. The method of claim **1** wherein the device forming mixture further comprises one or more ingredients selected from the group consisting of copolymerizable cross-linking monomers and blue-light absorbing chromophores.

14. The method of claim **1** wherein the blue-light source has an intensity of from about 1 to about 40 mW/cm^2 and the period of time in which the device forming mixture is exposed to the blue-light source is from about 5 minutes to about 4 hours.

15. The method of claim **14** wherein the bluelight source has an intensity of from about 10 to about 15 mW/cm^2.

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